

CLAIMS

What is claimed is:

1. A user interface for receiving inputs from a user, the user interface comprising:
 - a touch sensitive surface having a plurality of regions, each region corresponding to a switch having a function; and
 - an interface disposed on the touch sensitive surface over at least one of the plurality of regions, the interface comprising a material that is at least partially transparent and configured to provide tactile feedback to the user;wherein the interface includes a plurality of buttons disposed over the plurality of regions and light is selectively provided to each of the plurality of buttons.
2. A user interface according to claim 1, wherein the interface comprises at least one button disposed over a region.
3. A user interface according to claim 2, wherein the function corresponding to the at least one button may be reconfigured by at least changing light emitted from the touch sensitive surface.
4. A user interface according to claim 1, wherein the touch sensitive surface emits light that is visible through the interface.
6. A user interface according to claim 1, wherein the user interface is mounted in a vehicle.
7. A user interface according to claim 1, wherein the touch sensitive surface includes a display for at least one of graphics and text, and the at least one of graphics and text are visible through the interface.
8. A user interface according to claim 1, wherein the touch sensitive surface and interface are mounted in an automobile interior element.
9. A user interface according to claim 7, wherein the display is mounted in an automobile interior element.
10. A user interface for a vehicle, the user interface comprising:
 - a plurality of switches, each switch corresponding to a function;
 - an interface disposed over at least one of the plurality of switches, the interface comprising a material that is at least partially transparent and configured to provide tactile feedback to a user; and

a display disposed beneath the interface, the display configured to provide display signals corresponding to the function of each switch;

wherein the interface includes a plurality of buttons disposed over the plurality of switches and light is selectively provided to each of the plurality of buttons.

11. A user interface according to claim 10, wherein the interface includes at least one button disposed over a switch of the plurality of switches.

12. A user interface according to claim 10, wherein the display signals include light that is visible through the interface.

14. A user interface according to claim 10; wherein the display signals include text that is visible through the interface.

15. A user interface according to claim 10, wherein the display signals include graphics that are visible through the interface.

16. A user interface according to claim 10, wherein the plurality of switches, interface and display are mounted in a automobile interior element.

17. A user interface system for a vehicle, the system comprising:
a display;
an interface disposed over the display and comprising a material that is at least partially transparent and configured to provide tactile feedback to a user, the interface including a plurality of contact regions, each contact region corresponding to a switch having a function;

a control circuit coupled to the display and the interface, the control circuit configured to receive control data from the interface in response to actuation of a contact region, to provide the control data to a vehicle system based on the corresponding switch function and to provide display signals to the display based on the corresponding switch function; and

a memory coupled to the control circuit and configured to store display data.

18. A user interface system according to claim 17, wherein the display is a touch sensitive surface having a plurality of regions, each region corresponding to a switch having a function.

19. A user interface system according to claim 17, wherein the display, the interface, the control circuit and the memory are mounted in an automobile interior element.

20. A user interface system according to claim 17, wherein a function corresponding to a contact region may be reconfigured by at least changing the display signals provided to an area of the display disposed beneath the contact region.

21. A used interface according to claim 1, wherein the switch is a rotary switch configured to twist with respect to the interface; and

wherein twisting of the switch controls light which is selectively provided to any one of the plurality of regions on the touch sensitive surface, each region corresponding to a different function, wherein the switch is further configured to control any one of the functions.

22. A user interface according to claim 1, wherein the switch is configured to move in a direction not perpendicular to the face of the display; and

wherein moving of the switch in a direction not perpendicular to the face of the display controls light which is selectively provided to any one of the plurality of regions on the touch sensitive surface, each region corresponding to a different function, wherein the switch is further configured to control any one of the functions.

23. A used interface according to claim 1, wherein the interface is further configured to provide tactile feedback in the manner of audible feedback.

24. A used interface according to claim 1, wherein the interface is further configured to provide tactile feedback in the manner of vibratory feedback.

25. A used interface according to claim 10, further comprising:
a rotary switch configured to twist with respect to the interface;
wherein the rotary switch is configured to control a plurality of functions; and
wherein twisting of the rotary switch controls light which is selectively provided to any one of the plurality of regions on the touch sensitive surface, each region corresponding to a function in the plurality of functions.

26. A user interface according to claim 10, wherein the switch is configured to move in a direction not perpendicular to the face of the display; and

wherein moving of the switch in a direction not perpendicular to the face of the display controls light which is selectively provided to any one of the plurality of regions on the touch sensitive surface, each region corresponding to a different function, wherein the switch is further configured to control any one of the functions.

27. A used interface according to claim 10, wherein the interface is further configured to provide tactile feedback in the manner of audible feedback.

28. A used interface according to claim 10, wherein the interface is further configured to provide tactile feedback in the manner of vibratory feedback.